



## Appendix A - Standard Terminology

### 1.0 **Purpose**

This section is designed to provide acceptable terminology and definitions for use when conducting occurrence reporting. Using accepted standard terminology will increase understanding and consistency of occurrence reports and allow for more accuracy in data interpretation.

### 2.0 **Scope**

This appendix provides additional explanations and examples of the definitions currently found in DOE O 232.1, and adds definitions of terms not found in DOE Manual 232.1-1 but commonly used in occurrence reporting.

### 3.0 **Definitions**

#### Authority File

A computer file that originates from a registration form which allows the user access to the Occurrence Reporting and Processing System (ORPS). This file is used to generate standard information about the ORPS user (i.e., Name, Site Name, Phone number) and to provide the user with varying degrees of access based on need (i.e., Facility Manager/Designee, U.S. Department of Energy Facility Representative, U.S. Department of Energy-Headquarters Program Manager, or General User).

#### Authorized Classifier:

##### Original Classifier:

An individual authorized to classify National Security Information (NSI) by an original determination based on Executive Order 12356, where no specific guidance exists.

##### Derivative Classifier:

An individual authorized to classify documents or material as Restricted Data (RD), Formerly Restricted Data (FRD), or NSI only in accordance with existing guidance.

#### Balance of Plant

Balance of Plant is a Facility Function Code for those ancillary or supporting systems for the primary facility functions such as office machine shops, transportation, outside utility areas, or general facility grounds. Any building, organization, structure, process, or area of the site whose primary function is not identified in the following list may also be considered as a Balance of Plant area.

- Plutonium Processing and Handling
- Special Nuclear Material (SNM) Storage
- Explosive



- Uranium Enrichment
- Uranium Conversion/Processing and Handling
- Irradiated Fissile Material Storage
- Reprocessing
- Nuclear Waste Operations
- Tritium Activities
- Fusion Activities
- Environmental Restoration Operations
- Category "A" Reactors
- Category "B" Reactors
- Solar Activities
- Fossil and Petroleum Reserves
- Accelerators

#### Case Study

An instructional method designed to promote better understanding of a specific event by presenting information related to the event in a way that the audience considers it relevant to their job.

#### Categorization

Ranking of the occurrence to the categorization level, group, and specific criteria to ensure that the occurrence is categorized to the appropriate criteria.

#### CERCLA

Comprehensive Environmental Response, Compensation, and Liability Act of 1990. This is a federal law that contains designations of hazardous substances. The list is contained in 40 CFR 302.4, and designates the amount of a particular hazardous substance that exceeds a reportable quantity.

#### Concern

Matter of interest that may involve an event or condition adverse to safety, health, quality assurance, or security, or which has environmental implications and may result in a reportable occurrence.

#### Condition

Any as-found state, whether or not resulting from an event, which may have adverse safety, health, quality assurance, security, operational, or environmental implications. A condition is more programmatic in nature. For example, an error in analysis or calculation, an anomaly associated with design or performance, or an item indicating a weakness in the management process are all conditions.



#### Contributing Cause

A cause that contributed to an occurrence but, by itself, would not have caused the occurrence. For example, in the case of a leak, a contributing cause could be the lack of adequate operator training in leak detection and response, resulting in a more severe event than would have otherwise occurred. In the case of a system misalignment, a contributing cause could be excessive distractions to the operators during shift change, resulting in less-than-adequate attention to important details during system alignment.

#### Corrective Action

Action taken to correct root, direct, or contributing cause of an event or occurrence and prevent its recurrence. A corrective action can be the same as an immediate action; however, corrective actions are usually those actions taken to correct the identified root cause of an event after a causal analysis has been performed.

#### Defective Item, Material or Service

Any item, material, or service that potentially or actually does not meet a national consensus standard for such item, material, or service, or is a copy or modification of an item, material, or service that does meet such standard without the authority or right to do so. These consist of items, materials, or services that do not meet or that fall short of the commercial standard or procurement requirements as defined in catalogs, proposals, procurement specifications, design specifications, testing requirements, contracts, or the like. It includes those items or services found not to meet the quality or reliability requirements appropriate to the use of specificity of the item or service procured. It also includes misrepresentation of the specifications or trademarks associated with the parts/service marking, packaging, or certification identification/stamps. It does not include parts or services that fail or are otherwise found to be inadequate because of random failures or errors.

#### Direct Cause

The cause that directly resulted in the occurrence. For example, in the case of a leak, the direct cause could have been the failure in the component or equipment that leaked. In the case of a system misalignment, the direct cause could have been operator error in the alignment.

#### Emergency Occurrence

Emergency occurrences are the most serious occurrences and require an increased alert status for onsite personnel and, in specified cases, offsite authorities. The detailed definitions, criteria, and classifications of emergencies and appropriate emergency responses to be taken are provided in DOE Order 151.1.

#### Event

Something significant and real-time that happens (e.g., pipe break, valve failure, loss of power, environmental spill, earthquake, tornado, flood).



Facility

Any equipment, structure, system, process, or activity that fulfills a specific purpose. Examples include accelerators, storage areas, fusion research devices, nuclear reactors, production or processing plants, coal conversion plants, magnetohydrodynamics experiments, windmills, radioactive waste disposal systems and burial grounds, environmental restoration activities, testing laboratories, research laboratories, tank farms, machine shops, powerhouses, transportation activities, and accommodations for analytical examinations of irradiated and unirradiated components. For occurrence reporting purposes, each site must ensure that every possible area of the site is covered by a facility, to include parking lots, fields, and forests within the site boundaries, and organizational areas that do not operate within a specific facility. These areas include security, transportation, health physics, road maintenance, railroads, and general office space.

Facility Manager/Designee

That individual, or his or her designee, usually but not always a contractor, who has direct line responsibility for operation of a facility or group of related facilities, including authority to direct physical changes to the facility. The facility manager designee is a person within the facility operations organization who has been delegated responsibility by the facility manager.

Facility Representative, DOE

For each major facility or group of lesser facilities, an individual or his or her designee assigned responsibility by the Head of the Field Organization for monitoring the performance of the facility and its operations. This individual shall be the primary point of contact with the contractor and will be responsible to the appropriate Program Secretarial Officer and Head of Field Organization for implementing the requirements of DOE Order 232.1.

Federally Permitted Release

Any release that satisfies the definition of "federally permitted release" in 40 CFR 302.3.

Final Occurrence Report

The Occurrence Report that also includes a root cause analysis discussion, corrective actions, and a final evaluation and lessons learned prepared by the Facility Manager.

General Users

A type of access to ORPS that provides access to occurrence information, but does not permit the transmittal or update of occurrence information.

Good Work Practice

A management or work practice identified as innovative and potentially beneficial to other organizations.



#### Graded Approach - Significance Determination

An approach where the rigor of analysis, the priority of corrective action, and the extent of follow-up evaluation vary with the risk of the identified condition. The higher the risk value or significance of the detected condition, the more intensive the corrective action required. A common process of graded approach in determining corrective actions is the Priority Planning Grid (PPG) and Significance Matrix where an assigned value is used to determine the appropriate follow-up actions.

#### Hazardous Substance or Material

Any solid, liquid, or gaseous material that is toxic, flammable, radioactive, corrosive, chemically reactive, or unstable upon prolonged storage in quantities that could pose a threat to life, property, or the environment. This definition is applicable to DOE O 151.1; it is an omnibus term used to include both "hazardous materials" and "hazardous substances" as defined under CERCLA.

#### Extremely Hazardous Substances - SARA (see 40 CFR 355)

These are not defined, but appear on a list in Appendix A and B of 40 CFR 355.

#### Hazardous Chemical - OSHA (see 29 CFR 1900.1000 and 29 CFR 1910.1200)

Any chemical that is a physical hazard or health hazard.

#### Hazardous Materials - DOT (see 49 CFR 171.8 and 172.101)

A substance or material, including a hazardous substance, that has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated.

#### Hazardous Substances - EPA (see 40 CFR 302 and 40 CFR 262)

For purposes of transportation, see 49 CFR 171.8 and 172.101.

#### Hazardous Wastes - EPA (see 40 CFR 261 and 40 CFR 262)

Any material that is subject to the Hazardous Waste Manifest Requirements of EPA specified in 40 CFR 261. For purposes of transportation, see 49 CFR 171.8.

#### INPO Significant Event Evaluation and Information Network (SEE-IN) Reports

Documents that provide in-depth review and analysis of selected industry events. These documents include the Significant Operating Experience Report (SOER) and the Significant Event Reports (SERs), which are generated for situations involving significant safety issues, and Operations and Maintenance Reminders (O&MR) for events of generic interest that do not involve safety significantly.

#### Item

An all-inclusive term used in place of the following: appurtenance, sample, assembly, component, equipment, material, module, part, structure, subassembly, subsystem, unit, documented concepts,



or data.

#### Lessons Learned

An experience, example, observation, or positive insight that constitutes a "good work practice" or defines and identifies the solution to a problem that could be of benefit to other internal or external DOE organizations.

#### Near Miss

A situation in which an inappropriate action occurs (or a necessary action is omitted) but is detected and corrected before an adverse effect on personnel or equipment results. A near miss can be the failure of three generators in a four-generator system or all but one security barrier failing in a layered system.

#### Notification Report

The initial documented report to DOE of an event or condition that meets the reporting criteria defined by DOE Manual 232.1-1. The notification report consists of Fields 1 through 19 of the occurrence report and is required to be submitted to ORPS by end of the next business day (not to exceed 80 hours from the time of categorization).

#### Occurrence Category Level

The three levels of severity that an occurrence can be assigned. These levels are Emergency, Unusual, and Off-Normal.

#### Occurrence Report

A documented evaluation of an event or condition that is prepared in sufficient detail to enable the reader to assess its significance, consequences, or implications and to evaluate the actions being proposed or implemented to correct the condition or to avoid recurrence.

#### Occurrence Report Number

The tracking number that is automatically assigned by ORPS when a report is transmitted and includes the Field office designator, area office (if applicable), DOE contractor or laboratory designator, facility designator, calendar year of the occurrence, and a sequential number of the occurrence by facility.

#### Occurrence Reporting and Processing System (ORPS)

A computerized central DOE operational database that permits key personnel to submit, update, retrieve, sign, and store unclassified ORs from the DOE community. It can be accessed by authorized individuals throughout the DOE community for the purpose of learning from recent experiences.

#### ORPS System Administrator

The organization assigned responsibility by DOE to operate and manage ORPS. Currently, these



responsibilities are assigned to the Lockheed Martin Idaho Technologies Company (LITCO).



Off-Normal Occurrence

Off-normal occurrences are abnormal or unplanned events or conditions that adversely affect, potentially affect, or are indicative of degradation in the safety, security, environmental, or health protection performance or operation of a facility.

Oil

Oil of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.

Preparedness

The training of personnel, acquisition and maintenance of resources, and exercising of the plans, procedures, personnel, and resources essential for emergency response.

Primary Environmental Monitors

Monitoring equipment legally required to monitor ongoing discharges. In general, this term applies to monitors closest to the point of discharge that are used to determine if discharges are within specified limits. It also includes any equipment that actuates automatically in response to set level signals from such a monitor. It does not include equipment in a general area, remediation, or compliance monitoring programs.

Program Manager - DOE-HQ

The DOE Headquarters (DOE-HQ) individual, or his or her designee designated by and under the direction of a Cognizant Secretarial Officer, who is directly involved in the operation of facilities under his or her cognizance, and with authority to provide technical direction through DOE Field Organizations to contractors for these facilities.

Program Significant Cost

Event that meets the criteria of Group 7, Value Basis Reporting. Any occurrence specifying cost as the basis for reporting. This is used mostly in the evaluation phase of an occurrence and may trigger additional reporting via other criteria.

Program Significant Delay

Event that meets the criteria of Group 8, Facility Status. Any unplanned occurrence in any portion of a program conducted in accordance with approved requirements and procedures that results in the facility, process, or activity being secured, a shutdown being extended, or a start-up being delayed.

Release

Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or otherwise disposing of substances into the environment. This includes abandoning/discarding any type of receptacle containing substances in an unenclosed containment structure, direct releases to the land surface, releases to ambient air either directly or by way of



facility ventilation systems, releases to liquid effluent systems, releases from storage or shipping containers, spread of contamination from a previous release or disposal site, and stockpiling of a CERCLA hazardous substance in an unenclosed containment structure. Release to the environment is defined by 10 CFR 302 and modified by the U.S. Court of Appeals to be "the placement of an RQ of a hazardous substance in an unenclosed structure ... would constitute a release regardless of whether an RQ of the substance actually volatilized into the air or migrates into surrounding water or soil." Under CERCLA's provisions, "nothing less than the actual release of hazardous material into the environment triggers its reporting requirements." Therefore, if the hazardous material does not come in contact with the environment, i.e., "navigable waters ..., any other surface water, ground water, drinking water supply, land surface or subsurface strata, or ambient air ...," it is not considered to be released for CERCLA reporting requirements.

#### Reportable Occurrence

Events or conditions to be reported in accordance with the criteria defined in DOE Manual 232.1-1.

#### Reportable Quantity

For any CERCLA hazardous substance and radionuclide, the quantity established in 40 CFR 302, the release of which requires notification unless federally permitted. The release of any hazardous substance or radionuclide that meets or exceeds 50% of the reportable quantity (RQ), as established in 40 CFR 302, will require reporting via DOE Manual 232.1-1.

#### Response

Represents the implementation of planning and preparedness during an emergency and involves the effective decisions, actions and application of resources that must be accomplished to mitigate consequences and recover from an emergency.

#### Reviewing Official

A designation of an individual who makes a determination that a document or material contains, does not contain, or no longer contains Unclassified Controlled Nuclear Information (UCNI).

#### Root Cause

An underlying or initiating event or condition, within management control, that produces the failure of a component that, if corrected, will mitigate the occurrence/recurrence. A root cause can have implications that go beyond a single occurrence. The root cause can have generic implications to a broad group of possible occurrences, and is the most fundamental aspect of the cause that can logically be identified and corrected. There may be a series of causes that can be identified, one leading to another. This series should be pursued until the fundamental, correctable cause has been identified.



#### Safety Class Systems, Structures or Components (SSCs)

Systems, structures, or components including primary environmental monitors and portions of process systems, whose failure could adversely affect the environment or safety and health of the public. For nuclear reactors and non-reactor nuclear facilities, Safety Class SSCs includes those systems, structures, or components with the following characteristics.

- Those whose failure would produce exposure consequences that would exceed DOE established guidelines at the site boundary or nearest point of public access.
- Those required to maintain operating parameters within the safety limits specified in Technical Safety Requirements (i.e., Technical Specifications or Operational Safety Requirements) during normal operations and anticipated operational occurrences.
- Those required for nuclear criticality safety.
- Those required to monitor the release of radioactive materials to the environment during and after a design-basis accident.
- Those required to monitor and maintain the facility in a safe shutdown condition.
- Those that control the safety class items described above.

#### Safety Significant Systems, Structures, or Components (SSCs)

Systems, structures, or components, including secondary environmental monitors, whose failure could result in facility shutdown or degradation of operating parameters. Failure of non-safety class equipment shall not adversely affect the environment or the safety and health of the public. In addition, their failure shall not prevent safety class equipment from performing its required function. This is not intended to include hand-held fire extinguishers, hand rails, goggles, boundary ropes, chains, or any other minor safety items that could be included under literal compliance.

#### Secondary Environmental Monitors

Environmental monitoring equipment or activities that, if degraded, will produce a more than minor disruption of a monitoring program. An example of a minor effect would be the failure of a unit whose place in the program is effectively duplicated by overlap between one or more other components. An example of a more than minor effect would be the failure of sufficient units such that continued coverage is precluded, or the failure of a unit that provides the only coverage for large areas, such as a groundwater monitoring well.

#### Service

The performance of work, such as design, construction, fabrication, inspection, nondestructive examination and/or testing, environmental qualification, equipment qualification, repair,



installation, or the like.

Supplier

The organization that furnishes items or services. An all-inclusive term used in place of any of the following: vendor, seller, contractor, subcontractor, fabricator, distributor, consultant, or subtier suppliers.

Transportation Occurrence

Any real-time occurrence involving any of the following transportation activities: material classification, packaging, marking, labeling, placarding, shipping paper preparation, loading/unloading, separation/segregation, blocking and bracing, routing, accident reporting, and movement of materials.

Offsite Transportation Occurrence

Involves movement of materials that are considered to be in commerce, thus requiring compliance with DOT Hazardous Materials Regulations.

Onsite Transportation Occurrence

Involves movements of materials that are not in commerce, thus are transported in accordance with DOE onsite safety requirements.

Unclassified Controlled Nuclear Information

Certain unclassified government information prohibited from unauthorized dissemination under Section 148 of the Atomic Energy Act-As Amended.

Unenclosed Containment Structure

Any surface impoundment, lagoon, tank, container, or other holding device that has an open side with the contained materials directly exposed to the ambient environment.

Unusual Occurrence

An unusual occurrence is a nonemergency occurrence that has significant impact or potential for impact on safety, environment, health, security, or operations.